1998 ALASKA TSUNAMI INUNDATION MAPPING: MARCH 23-24, 1998 KODIAK BOROUGH SITE INSPECTIONS AND MEETINGS

NTHMP Participants:

Mike Webb, Marvin Smith and Keith Hudson (Alaska Department of Emergency Services)
Elena Troshina (Geophysical Institute, University of Alaska Fairbanks)
Rod Combellick (Alaska Division of Geological & Geophysical Surveys)
Chris Jonientz-Trisler (Federal Emergency Management Agency)
Frank Gonzalez and Robert Kamphaus (National Oceanic and Atmospheric Agency / Center for Tsunami Inundation Mapping Efforts)

On 23-24 March 1998, site visits and exploratory meetings were conducted on Kodiak Island, Alaska, for the purpose of evaluating Kodiak regional needs for tsunami inundation maps. This activity is a component of the National Tsunami Hazard Mitigation Program, a State/Federal partnership to provide products to assist tsunami hazard assessment and mitigation efforts in threatened communities. Kodiak was previously identified as a high-priority region for inundation mapping; it is characterized by a number of communities with relatively large populations, significant fishing and other commercial resources, and a vulnerability to tsunamis demonstrated by the 27 March 1964 event.

A previous study (J. Preuss, et al, 1988; Planning for Risk: Comprehensive Planning for Tsunami Hazard Areas, National Science Foundation Final Report, 246 pp.) provided an excellent summary and analysis of damage patterns suffered in Kodiak City during the 1964 tsunami. The work utilized numerical simulations to facilitate a retrospective interpretation of the event. In addition, simulations were made to help assess the effects of a similar future event; this simulation, of course, modeled Kodiak City and harbor as they existed at the time of the study, i.e. 1988.

On 23 March, a meeting of all NTHMP participants and Linda Freed, Director of the Community Development Department of the Kodiak Island Borough, was held at the Borough offices. Freed emphasized that over the last ten years there had been substantial growth of Kodiak City and other Borough communities, a number of construction and engineering projects, and significant changes to the harbor. As a consequence, the 1988 report was a good start, but was not adequate to meet current needs. Specifically, the area studied in Kodiak City was quite small and limited to the main downtown section, and the project did not provide easily usable products to local planners. Furthermore, she identified 6 communities on Kodiak Island that

were of immediate concern. In order of priority, these were the larger area occupied by Kodiak City, the Coast Guard base, Women's Bay residential community, Chiniak, Pasagshak, and Anton Larsen. (Ouzinkie and Port Lions were also identified as communities at potential risk.) Each of the first three communities were within an hour drive of one another, so site inspections were made of Kodiak City, the USCG base, and the Women's Bay community later that afternoon.

On 24 March, a second meeting was held with local government officials. In addition to all NTHMP participants, attendance included Jerome Selby (Mayor of Kodiak Borough), Carolyn Floyd (Mayor of Kodiak City), CAPT Charles Wurster (CO, USCG Base), CDR Mark Frost (USCG), Joe Hart (Chief, Kodiak Fire Dept.), Clee Ann McAllister (Kodiak Red Cross), and Matt Kenney (American Red Cross Disaster Response Planner).

Freed, Webb, Jonientz-Trisler, Combellick and Gonzalez summarized the previous day's activities. The 1988 report was briefly reviewed, and the suggested priority communities were discussed. There followed an extended question and answer session, during which Selby expressed some specific concerns regarding the communities of Ouzinkie and Akhiok, and the desirability of keeping them in mind for future studies if they were not included in this year's work. Selby, Floyd and the other local officials then conducted a brief discussion of the presentations and the suggestions regarding community priorities and the scope of the work to be done. There was unanimous agreement by Selby, Floyd and the other local officials that the proposed project was highly desirable, that the three suggested priority communities were correctly identified, and that the Borough and City would enthusiastically support the effort. The formal meeting was then adjourned.

After the meeting, informal discussions continued regarding the feasibility of including all three top priority communities in the inundation mapping project. Specific issues included bathymetric and topographic data availability, identification/definition of potential source(s) that threaten this area, and the amount of time and financial resources available to complete the project. The general consensus is that the project is feasible, in large part because of the close proximity of the three communities. However, the final definition of the project awaits a more careful assessment of the work to be performed, and the development and submission of a formal proposal.

Critical tasks and the associated individuals are summarized below. Task 1 is complete, and portions of Tasks 4, 5 and 6 can be performed in parallel. Note, however, that this summary assumes the review and approval of a formal proposal submitted to ADES for the inundation modeling work (Tasks 2 and 3); this proposal may be brief, but should include sections on (a) Description of Work, (b) Schedule of Work, and (c) Budget.

SUMMARY OF CRITICAL TASKS

Kodiak Borough Inundation/Evacuation Mapping Project

1. IDENTIFY AND PRIORITIZE COMMUNITIES. (Completed 23-24 March 1998, and approved by local government officials.)

- Linda Freed (Director, Community Development, KIB)
- Other local officials and planners
    1. Kodiak City
    2. USCG Base
    3. Women's Bay community

2. DEVELOP AND SUBMIT PROPOSAL.

- Roger Hansen (Alaska State Seismologist, GI/UAF)
- Elena Troshina (GI/UAF)

3. REVIEW PROPOSAL.

- Mike Webb (ADES)
- Technical Advisors

4. IDENTIFY POTENTIAL TSUNAMI SOURCE(S).

- Roger Hansen (AK State Seismologist, GI/UAF)
- Rod Combellik (ADGGS)
- Other Colleagues and Technical Advisors

5. CONSTRUCT NUMERICAL BATHYMETRY/TOPOGRAPHY GRIDS.

- Elena Troshina (GI/UAF)
- Robert Kamphaus (NOAA/PMEL)
- Rod Combellick (ADGGS)
- Linda Freed (CDC/KIB) (Marine/coastal structure information)

6. PERFORM AND ANALYZE INUNDATION SIMULATIONS. (Report required. Zygmunt Kowalik, UAF, agrees to serve as Technical Advisor.)

- Elena Troshina (GI/UAF)

7. CONSTRUCT EVACUATION MAPS.

- Linda Freed (CDC/KIB)
- Representatives of Kodiak City, USCG base, Women’s Bay
- Marvin Smith (ADES/Region 2)

8. PUBLISH INUNDATION AND EVACUATION MAPS. (Report required.)

- Rod Combellik (ADGGS)
- Others, as appropriate